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**Roll No:** P17-6011

**Section:** A

**Instructor:** Sir Shakirullah Shah

1. ∑ = {1, 0}; Ends with 1

= {1, 11, 01, 001, 011, 101, 111, 0001, 0011, 0101, 0111, 1001, …}

1. ∑ = {a, b} ; Odd number of a’s and b’s

= {ab, ba, aaabbb, aababb, aabbab, aabbba, ababba, abbaba , abbbaa , ababab, …}

1. ∑ = {a, b} ; b’s should be equal to └ a/2 ┘

= { ƛ , a , aab , aba , baa , aaab , aaba , abaa , baaa , aaaabb ,…}

1. ∑ = {a,b,c} ; c’s should be equal to number of a’s + b’s

= {ƛ , ac , ca , bc , cb , abcc , acbc , accb , cabc , cacb,… }

1. ∑ = {a,b} ; more the one a’s cannot be conseative

= { ƛ , a, b, ab , ba, aba , bba , abb , bab , abab… }

1. ∑ = {a,b} ; a’s and b’s both should be present

= {ab , ba , aab , aba , baa , bba , bab ,abb , aabb , abab,… }

1. ∑ = {a,b} ; a’s and b’s should not be equal

= {a , b , aab , aba , baa , bba , bab , abb , abbb , babb ,…}

1. ∑ = {1,2 } ; palindrome that ends with 2

= {2 , 212 , 222 , 2112 , 2222 , 21212 , 22122 , 21112 , 22222 , 211112 ,… }

1. ∑ = {1,2} ; 1 cannot be in between the word

= { ƛ , 1 , 2 , 12 , 21 , 121 , 122 , 221 , 222 , 1221 ,… }

1. ∑ = {3,5} ; Number of 3’s should be even

= { ƛ , 5 , 33 , 55 , 335 ,353 , 533 , 555 , 3355 , 3535 ,…}